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FIRST-GRADE READING INSTRUCTION.

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*READING ACHIEVEMENT, *PRESCHOOL PROGRAMS, FIRST GRADE, READING READINESS, BASAL READING, *NONGRADED CLASSES, *READING PROGRAM, ASHEVILLE, NORTH CAROLINA, METROPOLITAN READINESS TEST, HEAD START

THE MAJOR OBJECTIVE OF THIS STUDY WAS TO TEST THE NULL HYPOTHESES THAT THERE WOULD BE NO SIGNIFICANT DIFFERENCES IN THE CHANGE IN READING ACHIEVEMENT LEVEL OF SEVERAL VARIED GROUPS OF PUPILS. THE MEASURE OF READING ACHIEVEMENT WAS THE METROPOLITAN READINESS TEST. THE MINIMUM ACCEPTABLE CONFIDENCE LEVEL WAS .05. SEVERAL CONCLUSIONS WERE REACHED. FIRST, WHEN CONTINUOUS PROGRESS PROGRAM PUPILS WHO WERE TAUGHT BY TEACHERS WHO HAD FORMAL TRAINING WITHIN THE LAST 5 YEARS WERE COMPARED WITH PUPILS IN THE SAME PROGRAM WHO WERE TAUGHT BY TEACHERS WITHOUT FORMAL TRAINING WITHIN THE PAST 5 YEARS, NO SIGNIFICANT DIFFERENCES APPEARED. SECONDLY, UNDER THIS SITUATION, HEAD START PROGRAM PUPILS WERE ABLE TO COMPETE EQUALLY WITH OTHER FIRST GRADERS.+(LP)

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FIRST-GRADE READING INSTRUCTION

Cooperative Research Project No. 2874

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THE ASHEVILLE CITY SCHOOLS
Asheville, North Carolina

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PROBLEM

Do pupils who possess low, average, or high reading readiness show a more positive change in reading achievement when involved in a non-graded reading program which assures continuous progress than a like group of pupils who are subjected to a developmental basal reading program?

What do parents and teachers think of a non-graded reading program which places stress on continuous progress as compared to the developmental basal reading program?

Do pupils enrolled in schools where the pupil population comes primarily from upper, middle or low socio-economic groups profit more from a non-graded reading program or a developmental basal reading program?

Do pupils who have attended kindergarten profit more from a non-graded reading program or a developmental basal reading program?

Do pupils who have not attended kindergarten profit more from a non-graded reading program or a developmental basal reading program?

The proposed investigation will seek answers to the above questions.

The problem of providing an adequate reading program for first graders was serious enough to cause the supervisors of instruction, in 1959, to request from the Board of Education of the Asheville City Schools permission to extend the primary department to four years for those pupils who could not meet grade requirements in three years. This request was granted. Since this time some of the schools have attempted a modified ungraded plan of organization and some have tried other approaches to reading instruction. Since all of these efforts lack adequate direction and objective evaluation, the results have not proven fruitful.

Also the project was of significance since there is little or no conclusive evidence of the success of a non-graded reading program particularly in a setting where there is a variety of levels among the pupils relative to cultural, racial, and economic backgrounds.

In summary this investigation was worthy of undertaking for two basic reasons:

a. It was important to the Asheville City Schools in that it gave some objective bases for planning a more realistic program; and

b. It made an important contribution to the field of knowledge about the teaching of reading in general because there is conflicting opinion and deep concern about what direction the teaching of reading should take.

OBJECTIVES

The major objective of the proposed study was to test the following hypotheses which are stated in the null form to give appropriate direction to the statistical analysis.

a. There will be no significant difference in the change in reading achievement level of the total group of first grade pupils who are subjected to the non-graded reading program and the total group of first grade pupils who are subjected to the developmental basal reading program.

b. There will be no significant difference in the change in reading achievement level between

--the total group of first grade pupils enrolled in schools classified as upper socio-economic-class schools who are subjected to the non-graded reading program and the total group of first grade pupils enrolled in such schools and subjected to the developmental basal reading program.

--the total group of first grade pupils enrolled in schools classified as middle socio-economic-class schools who are subjected to the non-graded reading program and the total group of first grade pupils enrolled in such schools and subjected to the developmental basal reading program.

--the total group of first grade pupils enrolled in schools classified as low socio-economic-class who are subjected to the non-graded reading program and the total group of first grade pupils enrolled in such schools and subjected to the developmental basal reading program.

c. There will be no significant difference in the change in reading achievement level between

--the total group of first grade pupils classified as high in reading readiness in September, 1965, who are subjected to the non-graded reading program and a like group of first grade pupils who are subjected to the developmental basal reading program.

--the total group of first grade pupils classified as average in reading readiness in September, 1965, who are subjected to the non-graded reading program and a like group of first grade pupils who are subjected to the developmental basal reading program.

--the total group of first grade pupils classified as low in reading readiness in September, 1965, who are subjected to the non-graded reading program and a like group of first grade pupils who are subjected to the developmental basal reading program.

d. There will be no significant difference in the change in reading achievement level between

--the total group of first grade pupils who attended kindergarten and are subjected to the non-graded reading program and a like group of first grade pupils subjected to the developmental basal reading program.

--the total group of first grade pupils who did not attend kindergarten who are subjected to the non-graded reading program and a like group of first grade pupils subjected to the developmental basal reading program.

The measure of reading achievement was the Metropolitan Readiness Test administered in September, 1965, and the Metropolitan Achievement Test administered in May, 1966. Thus, change for each pupil was defined as the difference between scores achieved on these two tests. The minimum confidence level to be accepted as significant was .05.

A secondary objective of this investigation was to assess the opinions of parents from various socio-economic levels and of teachers in regard to the non-graded approach to reading instruction.

The orientation period for instructional purposes was equated for teachers of the non-graded group and the basal reading group.

RELATED RESEARCH

Samples of pertinent related research are summarized in the following accounts of three experimental studies:

a. A study conducted by Dr. Guy L. Bond at the University of Minnesota evaluates the reading achievement of two beginning fourth grade level groups who had been taught by different approaches in word recognition. The results showed that it was not possible on the basis of this study to assign superiority to any specific aspect of either approach.

b. Dr. Kent C. Austin of the University of Colorado in 1957 studied the ungraded primary unit. He found the main objectives of this approach to be (1) provide for individual differences, (2) facilitate continuous, uninterrupted progress, (3) release young children from tension, and (4) eliminate failures and needless repetitions.

c. Sister Mary Madeleine, Ph. D., Supervisor, Parochial School of the Chicago Area, compared children exposed to the multi-level reading program with those exposed to a one-level reading program at the fourth, fifth, and sixth grade levels. Conclusions indicated that children using multi-level materials will achieve greater competence in reading and vocabulary than those using the one-level reader approach.

PROCEDURES

a. General Design

The investigation was basically a parallel group design involving two large groups with various sub-groups within large groups. One of the groups was involved in a developmental basal reading program using state adopted basic readers. These graded materials began with reading readiness materials and ended with the basic first reader. The second group was in a non-graded program designed to use a variety of reading materials and books at whatever level of reading the pupils were capable. That is, the range of reading abilities of the pupils was met without restriction as to grade level of the materials. Enrichment and various levels of reading materials made the program distinctively different from the basal reading program.

The basal reader groups followed a developmental reading program in which pupils were heterogeneously grouped for room placement. The initial program began with reading readiness activities designed to promote social, emotional, physiological, language, and mental development. This was followed by formal reading instruction which included the development of a basic sight vocabulary, skill in phonetic and structural analysis, comprehension skills, and enrichment experiences.

There was flexible grouping within the classroom to accommodate the varying rates of progress.

The ungraded groups followed a developmental reading program in which pupils were grouped in classes homogeneously on the basis of levels of readiness for reading instruction.

In classes where the children were ready, formal reading instruction began after a short period of readiness experiences and followed a developmental program of reading skills with emphasis upon enrichment. In some instances psychological testing was done to determine why individual pupil progress was not being made.

In classes where the children were not ready for reading instruction, the readiness period was extended. This extension was determined by the progress within the different classes.

Flexible grouping within each class was practiced. Provision was made for advancement of pupils within and between groups as needed.

In using these two types of reading programs the basic criterion of success was the effect on reading achievement as measured by scores such as the Metropolitan Readiness test and the Metropolitan Achievement test administered uniformly by the Director of Instruction.

The independent variable in the proposed study was the reading treatment. The dependent variable was the subsequent change in achievement of pupils as measured by the two previously mentioned tests. There is some evidence that the basal reading program has been effective and has worked to a degree but does not always meet the needs of the wide range of reading abilities found among pupils in elementary schools. Consequently, there was a need to compare the basal reading program with the dirrerent approach--an approach that attempts

to meet the reading needs of all pupils in a non-graded individualized program. There is some evidence that the continuous progress program in a non-graded situation has been successful. Studies by Goodlad and Anderson show the wide range of reading abilities found among pupils in various schools and the need for the child to be permitted to progress at his own rate.

There are numerous instruments to measure reading achievement. Tests such as the Metropolitan Readiness test and the Metropolitan Achievement test were chosen because of their validity, reliability, and wide usage.

b. Population and Sample

In dealing with the major objective of this project, the population included the 11 elementary schools and approximately 900 (1965-1966) first grade pupils of the Asheville City Schools. From this population 9 schools containing approximately 800 first grade pupils enrolled in 29 different classes under the direction of 29 different teachers were chosen as a sample to be used in this investigation. This selection was made on the basis of two criteria:

(1) The principals and first grade teachers in these nine schools expressed a sincere desire to participate in an organized effort to improve reading instruction.

(2) The individual schools draw most of their pupils from a rather homogeneous socio-economic level as measured by the usual indices--occupation, income and housing.

> However, there are considerable differences among the schools in regard to socio-economic levels of pupils. A study of pupil record data contained in each individual school and the considered opinions of experienced staff members served as a basis for categorizing schools. Said another way, these particular schools were chosen because they were, in essence, within themselves, homogeneous in regard to socio-economic levels of pupils, but when considered collectively they represented the range of socio-economic levels.

Following is a list of the nine schools proposed for inclusion in the project along with the basic socio-economic levels of most pupils enrolled, the number of first grade classes and teachers involved in the project, and the number of pupils involved.

School	Socio-Economic Level	Number of First Grade Teachers	Number of First Grade Pupils
Aycock	Average	4	110
Claxton	Average	3	94
Jones	High	4	100
Newton	High	2	40
Vance	High	4	120
Rankin	Low	2	50
Herring	Low	2	60
Hill	Low	4	110
Livingston	Low	4	115

From the above listed schools, 5 schools were involved in the developmental basal reading program and 4 schools in the non-graded reading program.

In summary there were 14 classes and approximately 385 pupils utilizing the non-graded approach to reading instruction and 15 classes and approximately 415 pupils utilizing the developmental basal reading program.

Schools were initially assigned to either the basal reading program or to the non-graded reading program by means of random selection. However, to insure that this process had resulted in parallel equated groups, immediately upon the opening of school in September, 1965, each pupil involved in the project was administered two instruments. These were: the Metropolitan Readiness test and the Pintner-Cunningham General Ability test. Then a between-group comparison on each instrument was made utilizing the student's "t" test for independent groups. No significant "t" values at the .05 level of confidence resulted from this procedure, and the groups remained as initially assigned.

In dealing with the secondary objective which relates to opinions of parents and teachers regarding the non-graded reading program, all 29 teachers in the project were interviewed and 750 parents were queried by means of a questionnaire.

c. Data and Suggested Instrumentation

Data and instrumentation in relation to the primary objective are presented in terms of the previously stated hypotheses.

To test hypothesis one, individual pupils' scores on the September, 1965, Metropolitan Readiness test and the May, 1966, Metropolitan Achievement test were used.

In testing hypothesis two, the nine schools were classified as indicated in the previous section by socio-economic level and again the September, 1965, reading readiness test scores and May, 1966, reading achievement scores were used.

To test hypothesis three, the September, 1965, reading readiness test data and the May, 1966, reading achievement test data were utilized. The pupils were placed in high, average, or low groups based on the Metropolitan Readiness test scores. The test manufacturer's definition of high, average, and low was used.

To test hypothesis four, again, reading readiness and reading achievement scores were used and in addition, data were gathered from school records regarding kindergarten or non-kindergarten attendance of pupils.

For a secondary objective an interview guide was used with teachers. A copy is included at the end of this proposal. A questionnaire was used to query the parents, a copy of which is also included.

d. Analysis of the Data

The basic statistical technique utilized in analyzing the data in relation to the hypotheses contained under the primary objective of this investigation was the "t" test

for individual groups. A two-tailed test of significance utilizing the .05 level of confidence was applied in all incidences. In relation to hypothesis one the mean change scores between the September, 1965, and May, 1966, testings for the total group of pupils subjected to the developmental basal reading program and the total group of pupils subjected to the non-graded reading program was used and the "t" test was used to make a between-group comparison. In making application of the "t" test to hypothesis two, change scores were utilized and the "t" test for independent groups was applied between

--pupils in the high socio-economic group schools involved in the basal reading program and the like group of pupils involved in the ungraded reading program.

--pupils in middle socio-economic level schools involved in the basal reading program and the like group involved in the non-graded reading program.

--pupils in the low socio-economic level schools involved in the basal reading program and the like group in the non-graded reading program.

In making application of the "t" test to hypothesis three change again was utilized. T's were computed between

--initial high reading readiness pupils who were involved in the basal reading program and a like group of pupils who were involved in the non-graded reading program.

--average initial reading readiness pupils who were involved in the basal reading program and a like group of pupils involved in the non-graded program.

--low initial reading readiness pupils who were involved in the basal reading program and a like group of pupils involved in the non-graded reading program.

In regard to hypothesis four change again was used. More specifically "t's" between

--kindergarten-attending pupils involved in the basal reading program and kindergarten-attending pupils involved in the non-graded reading program.

--non-kindergarten-attending pupils involved in the basal reading program and non-kindergarten-attending pupils involved in the non-graded reading program.

The foregoing analysis enabled the acceptance or rejection of each of the hypotheses, or sub parts thereof, at the given level of confidence.

In dealing with the questionnaire and interview-guide data, which were gathered in relation to the secondary objective of the present investigation, no statistical analysis was made. These data were analyzed by socio-economic levels, by degree of approval or disapproval of parents, and by computing percentages of responses for each item contained in either the interview guide or the questionnaire.

The amount of training and the years of experience of teachers were considered in the analysis of data.

ANALYSES OF DATA AND FINDINGS

Table II presents the end-of-experiment (May, 1966) mean scores and standard deviations on each of the three variables measured by the Metropolitan Achievement Test for each of the pupil groups.* Also, contained in Table II are the computed "t" values for each between-group comparison indicated by the hypotheses. From an inspection of the data in Table II in relation to the hypotheses, it is noted that:

a. The null hypothesis relative to the total continuous progress program group and the total basal program group must be partially rejected. There were end-of-experiment significant differences between the two groups on the word knowledge and reading variables. Inspection of the group means shows that the differences were in favor of the continuous progress program group. The difference between the groups on the word discrimination variable was not significant.

b. The null hypothesis relative to the continuous progress program group enrolled in upper socio-economic class schools and the basal program group enrolled in upper socio-economic class schools must be rejected. End-of-the-experiment means were significantly different for each of the three variables. Inspection of the means shows that the differences were in favor of the continuous progress program group.

c. The null hypothesis relative to the continuous progress program group enrolled in middle socio-economic class schools and the basal program group enrolled in middle socio-economic class schools must be accepted. In each instance the difference between the means was insignificant at the .05 level of confidence.

d. The null hypothesis relative to the continuous progress program group enrolled in lower socio-economic class schools and the basal program group enrolled in lower socio-economic class schools must be partially rejected. The differences between the means were significant in favor of the continuous progress program group on the word knowledge and reading variables. The difference between the means on the word discrimination variable was not significant.

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*Differences in group n's between Table I and Table II are the result of some pupils not being available for end-of-experiment testing.

e. The null hypothesis relative to the continuous progress program group which was high in readiness at the beginning of the experiment and the basal program group which was high in readiness at the beginning of the experiment must be rejected. In each of the three instances the difference between means was significant and in each instance this difference was in favor of the continuous progress program group.

f. The null hypothesis relative to the continuous progress program group which was average in readiness at the beginning of the experiment and the basal program group which was average in readiness at the beginning of the experiment must be accepted. In no instance was the difference between the means significant at the .05 level of confidence.

g. The null hypothesis relative to the continuous progress program group which was low in readiness at the beginning of the experiment and the basal program group which was low in readiness at the beginning of the experiment must be partially accepted. The differences between the group means on the word knowledge and word discrimination variables were not significant. However, there was a significant difference in favor of the continuous progress program group on the reading variable.

h. The null hypothesis relative to the continuous progress program group which had <u>not</u> attended kindergarten and the basal program group which had <u>not</u> attended kindergarten must be partially accepted. The differences between means on the word knowledge and word discrimination variables were not significnat. The difference between the means on the reading variable was significant and in favor of the continuous progress program group.

i. The null hypothesis relative to the continuous progress program group which <u>had</u> attended kindergarten and the basal program group which <u>had</u> attended kindergarten must be rejected. In each of the three instances the difference between the means was significant and in each instance the difference was in favor of the continuous progress program group.

j. The null hypothesis relative to the continuous progress program group which <u>had</u> attended a head-start program and the continuous progress program group which had <u>not</u> attended a head-start program must be partially accepted. The differences between means on the word knowledge and reading variables were not significant. However, there was a significant difference in favor of the group which had attended a head-start program on the word discrimination variable.

k. The null hypothesis relative to the basal program group which <u>had</u> attended a head-start program and the basal program group which had <u>not</u> attended a head-start program must be accepted. In no instance was the difference between means significant.

l. The null hypothesis relative to the continuous progress program Negro group and the continuous progress program white group must be accepted. In no instance was the difference between means significant.

m. The null hypothesis relative to the basal program Negro group and the basal program white group must be partially rejected. The differences between means on the word knowledge and reading variables were significant and in favor of the white group. The difference between the word discrimination means was not significant.

n. The null hypothesis relative to the continuous progress program group taught by teachers who have <u>had</u> formal training in reading within the past five years and the continuous progress program group taught by teachers who have <u>not</u> had formal training in reading within the past five years must be accepted. In no instance was the difference between means significant.

CONCLUSIONS AND IMPLICATIONS

Every experiment conducted as part of an on-going school program is, to a degree, subject to weaknesses in design, instrumentation, and design execution. The present experiment was no exception. However, in spite of the obvious weaknesses, the following interpretative comments appear warranted from an analysis of the data gathered in the present experiment.

a. As indicated by the data, in 15 of 27 instances where direct comparisons were made, Asheville first grader groups enrolled in the continuous progress program achieved at a significantly higher level than the basal program group with which the comparison was made. In none of the 27 instances did the basal program group achieve significantly higher. However, it would appear erroneous to conclude that the continuous progress approach was superior in every respect. It would appear much more defensible to suggest that the continuous progress approach holds considerable promise for: (1) pupils enrolled in schools where the preponderance of the pupil population is at one extreme or the other (upper or lower) of the socio-economic class continuum, (2) pupils who are classified as high in readiness at the time they enter the first grade, (3) pupils who have attended kindergarten, and (4) Negro pupils*. The relative effect of the two approaches is open to question for: (1) pupils enrolled in schools where the preponderance of the pupil population is from the middle socio-economic class, (2) pupils classified as average or low in readiness at the time of entry into the first grade, and (3) pupils who have not attended kindergarten. Futhermore, the data indicate that the continuous progress approach is more likely to result in greater relative achievement as measured by the reading and word knowledge variables of the Metropolitan Achievement Test than the word discrimination variable.

b. As previously noted, when continuous progress program pupils who were taught by teachers who have had formal training within the last five years were compared with pupils in the same program who were taught by teachers without formal

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*This generalization is based on the fact that there were no significant differences between Negro and white groups in the continuous progress program; whereas, in two of three instances the basal program white group achieved at a significantly higher level than the basal program Negro group.

training within the past five years, no significant differences appeared. This would suggest that teacher training, in the formal sense, is not a crucial factor in the relative success of the continuous progress approach. However, it is apparent that teachers can be successfully introduced to the rational of the continuous progress approach by a relatively brief in-service training and supervisory program, and learn to implement it with a strong measure of reading success for certain types of pupils to a degree greater than that found in the usual basal program.

c. If it is assumed that the basic goal of head-start programs is to provide those pupils who attend an opportunity to compete on an equal basis with other first graders, then it must be concluded that in the present situation such programs were generally successful. (In one of three instances there was a significant difference between head-start and non-head-start continuous progress program pupils, and in no instance was there a significant difference between head-start and non-head-start basal program pupils.)

. Finally, it would seem desirable to make a longitudinal study of at least another two years to obtain further information concerning children's growth in the continuous progress program and in the basal reading program.

d. In dealing with the questionnaire for teachers, interview-questionnaire for parents, and the questionnaire concerning materials and procedures used in the classroom, the following data was obtained:

Questionnaire for Teachers - The general reaction to the program for teachers in the non-graded reading program was favorable. They felt that with this approach they were able to meet many more of the individual needs of the students and that the interest in reading was extremely high at all times. Compared with other years of teaching reading they felt that the rigidity of former programs was a hindrance. The non-graded program allowed flexibility and had a direct relationship to the specific needs of the children. The specific factors that were most significant in the progress of the students in the non-graded program included (1) the availability and use of many and varied materials, (2) the number of books read by each child, and (3) the high interest level of the students in reading. Hindrance to the program was the delay experienced in receiving the many and varied materials that were used. All teachers in the non-graded program chose to continue the non-graded program during the 1966-1967 school year. Teachers in the basal program chose to begin the non-graded program during 1966-1967.

The Interview-Questionnaire for Parents indicated that 400 parents thought their children had made high progress in reading, 229 parents thought their children had made average progress in reading, and 50 thought their children had made low progress in reading. Reading habits children had exhibited at home showed that 177 read magazines, 50 read comic books, 45 read parts of the newspaper, 209 read picture books, and 126 read other types of books and materials.

Interviews and meetings with 250 parents indicated they had a strong desire for their children to continue in the non-graded program. Plans have been made to continue a longitudinal study of the reading progress of children in the non-graded reading program.

The questionnaire concerning Materials and Procedures used in the Classroom gave the following data:

Teachers used many and varied materials all or most of the days or at least two to three times a week.

Word books and exercises in a variety of ways from every day to two or three times a week.

Due to the variety of needs in using audio-visual activities, the frequency of their use varied from almost every day to once or twice a year. However, the data indicates that adequate use was made.

Training for word recognition data showed that these skills, for the most part, were used most of the days in the year. Word meaning and comprehension skills were used, depending upon the need, most of the days in the year.

Study and critical skills were used most of the days of the year and oral reading activities were used from most of the days in the year to several times a year.

APPENDICES

APPENDIX A

Table I

TABLE I

ABILITY AND READINESS DATA FOR EQUATED FIRST GRADE PUPIL GROUPS AT THE BEGINNING OF THE EXPERIMENT (SEPTEMBER, 1965)

Group	Ability* Mean	Ability* St.Dev.	t Value	Readiness** Mean	Readiness** St.Dev.	t Value
Continuous Progress-Total Group (n=317)	104.62	19.99		50.11	18.71	
Basal Program-Total Group (n=318)	106.32	17.91	1.126	51.27	17.45	.810
Continuous Progress-Upper Socio-Economic Class Schools (n=77)	115.48	14.54		64.83	17.80	
Basal Program-Upper Socio-Economic Class Schools (n=140)	111.93	12.70	1.871	61.80	12.49	1.462
Continuous Progress-Middle Socio-Economic Class Schools (n=83)	100.11	21.00		49.87	16.50	
Basal Program-Middle Socio-Economic Class Schools (n=84)	105.82	19.68	1.814	46.80	18.72	1.124
Continuous Progress-Lower Socio-Economic Class Schools (n=154)	99.96	12.83		41.33	13.41	
Basal Program-Lower Socio-Economic Class Schools (n=70)	97.64	16.99	1.125	38.16	10.95	1.734
Continuous Progress-High Readiness (n=78)	123.05	18.17		74.78	6.91	
Basal Program-High Readiness (n=74)	121.34	12.45	.675	73.54	6.05	1.176
Continuous Progress-Average Readiness (n=103)	104.25	11.16		52.43	5.39	
Basal Program-Average Readiness (n=112)	103.24	20.89	.437	53.46	11.41	.840
Continuous Progress-Low Readiness (n=141)	93.14	15.58		31.64	8.28	
Basal Program-Low Readiness (n=114)	94.10	17.66	.458	32.25	8.43	.578
Continuous Progress-No Kindergarten Attendance (n=74)	112.50	12.28		57.87	11.00	
Basal Program-No Kindergarten Attendance (n=125)	111.04	13.29	.770	56.01	12.92	1.034
Continuous Progress-Had Attended Kindergarten (n=43)	114.21	17.07		62.07	13.46	
Basal Program-Had Attended Kindergarten (n=74)	111.86	14.63	.781	59.38	12.26	1.099

*The measure of ability was the Pintner-Cunningham General Ability Test.

**The measure of readiness was the Metropolitan Readiness Test.

TABLE I (continued)

Group	Ability* Mean	Ability* St.Dev.	t Value	Readiness** Mean	Readiness** St.Dev.	t Value
Continuous Progress-Had Attended a Head-Start Program (n=136)	102.88	14.21		46.10	12.88	
Continuous Progress-No Head-Start Program Attended (n=148)	99.80	17.44	1.622	48.07	17.16	0.755
Basal Program-Had Attended a Head-Start Program (n=103)	103.58	18.52		42.11	14.37	
Basal Program-No Head-Start Program Attended (n=116)	104.11	19.12	.207	45.84	16.09	1.799
Continuous Progress-Negro (n=87)	100.38	11.92		42.18	11.02	
Continuous Progress-White (n=155)	97.47	14.60	1.588	43.57	12.88	0.847
Basal Program-Negro (n=71)	104.89	17.71		43.41	11.50	
Basal Program-White (n=123)	103.76	15.42	.462	47.58	16.15	1.915
Continuous Progress-Teachers had formal training in last five years (n=124)	100.15	17.05		48.03	12.36	
Continuous Progress-Teachers without formal training in last five years (n=101)	101.10	15.24	0.434	45.53	16.65	1.295

*The measure of ability was the Pintner-Cunningham General Ability Test.
**The measure of readiness was the Metropolitan Readiness Test.

APPENDIX B

Table II

TABLE II

ACHIEVEMENT** FOR EQUATED FIRST GRADE PUPIL GROUPS AT THE END OF THE EXPERIMENT (MAY, 1966)

Group	Word Knowledge Mean	Word Knowledge St.Dev.	t Value	Word Discrimination Mean	Word Discrimination St.Dev.	t Value	Reading Mean	Reading St.Dev.	t Value
Continuous Progress-Total Group (n=276)	50.66	9.92		50.44	10.57		51.37	10.10	
Basal Program-Total Group (n=280)	48.46	10.99	2.476*	48.66	11.78	1.868	48.18	10.06	3.734*
Continuous Progress-Upper Socio-Economic Class Schools (n=69)	57.93	7.12		56.99	8.54		58.00	7.35	
Basal Program-Upper Socio-Economic Class Schools (n=127)	51.81	7.34	5.633*	52.50	8.60	3.498*	51.71	8.23	5.301*
Continuous Progress-Middle Socio-Economic Class Schools (n=73)	48.67	9.75		47.44	11.57		48.00	11.00	
Basal Program-Middle Socio-Economic Class Schools (n=69)	48.22	14.00	.225	46.16	14.45	.584	49.29	12.47	.654
Continuous Progress-Lower Socio-Economic Class Schools (n=130)	47.32	9.17		47.49	9.58		48.15	9.10	
Basal Program-Lower Socio-Economic Class Schools (n=65)	43.40	11.25	2.601*	44.82	11.06	1.741	42.69	8.21	4.078*
Continuous Progress-High Readiness (n=71)	59.49	5.44		59.65	6.22		60.48	6.64	
Basal Program-High Readiness (n=68)	55.69	5.67	4.035*	56.34	7.21	2.903*	56.13	7.56	3.606*
Continuous Progress-Average Readiness (n=95)	51.30	7.69		50.77	8.23		51.46	8.25	
Basal Program-Average Readiness (n=83)	49.89	9.10	1.115	49.58	10.16	.863	49.21	8.49	1.797
Continuous Progress-Low Readiness (n=111)	43.15	8.55		43.00	9.42		44.24	8.29	
Basal Program-Low Readiness (n=99)	41.85	11.39	.945	42.35	11.71	.443	41.30	8.57	2.524*

TABLE II (continued)

Group	Word Knowledge Mean	St.Dev.	t Value	Word Discrimination Mean	St.Dev.	t Value	Reading Mean	St.Dev.	t Value
Continuous Progress-No Kindergarten Attendance (n=71)	53.37	8.36		51.47	8.91		53.58	8.89	
Basal Program-No Kindergarten Attendance (n=109)	51.38	8.18	1.581	53.41	8.48	1.455	50.26	7.91	2.621*
Continuous Progress-Had Attended Kindergarten (n=40)	57.03	6.63		56.23	8.40		57.08	7.45	
Basal Program-Had Attended Kindergarten (n=59)	52.75	6.82	3.098*	52.07	8.43	2.412*	52.48	8.54	2.767*
Continuous Progress-Had Attended a Head-Start Program (n=117)	50.03	8.97		50.98	9.09		50.13	9.16	
Continuous Progress-No Head-Start Program Attendance (n=122)	49.76	9.74	.224	48.47	10.44	1.984*	50.98	9.23	.685
Basal Program-Had Attended a Head-Start Program (n=89)	45.87	12.23		45.97	12.78		44.43	10.17	
Basal Program-No Head-Start Program Attendance (n=107)	46.21	11.21	.203	46.35	11.55	.218	46.52	9.68	1.477
Continuous Progress-Negro (n=76)	46.86	8.77		46.12	9.53		47.38	9.29	
Continuous Progress-White (n-136)	47.84	8.78	.782	47.75	9.43	1.204	48.65	8.55	1.002
Basal Program-Negro (n=71)	43.44	10.35		45.15	10.42		43.66	8.24	
Basal Program-White (n=110)	48.17	9.43	3.388*	47.92	10.76	1.839	48.19	9.57	3.499*

TABLE II (continued)

Group	Word Knowledge Mean	Word Knowledge St.Dev.	t Value	Word Discrimination Mean	Word Discrimination St.Dev.	t Value	Reading Mean	Reading St.Dev.	t Value
Continuous Progress-Teachers Had Formal Training in Last Five Years (n=99)	49.51	9.39		49.44	8.98		49.57	9.62	
Continuous Progress-Teachers Without Formal Training in Last Five Years (n=97)	48.96	9.72	.400	48.46	10.62	.698	49.55	9.65	.014

*Significant beyond the .05 level of confidence.

**The measure of pupils' achievement was the Metropolitan Achievement Test. The instrument provides three scores--word knowledge, word discrimination, and reading.

APPENDIX C

Teacher Questionnaire

INTERVIEW-QUESTIONNAIRE FOR TEACHERS

1. What is your general reaction to the reading program as you have conducted it this year?

2. Compared with other years in teaching reading how do you feel about the progress your class has made?

3. What specific factors have in your opinion been most significant in the progress of your pupils this year?

4. What specific factors in your opinion have been hindrances to progress?

5. If given your choice, which kind of program would you choose for next year?

Teacher

School

APPENDIX D

Parent Questionnaire

INTERVIEW-QUESTIONNAIRE FOR PARENTS

1. What is your opinion as to the progress your child has made this year in reading?

   High_____ Average_____ Low_____

2. What reading habits does your child exhibit at home?

   Reads: Magazines_____ Comic Books_____ Newspaper_____

   Picture Books_____ Other_____

3. Have you any specific comments you would like to make about the way your child has been taught to read?

_____
Parents Signature

_____
School

APPENDIX E

Materials and Procedures

Date_____School_____Teacher_____

MATERIALS AND PROCEDURES USED IN YOUR CLASSROOM

Please check below the materials and procedures which you use in your reading lessons, or in developing your pupils' reading skills while teaching other subjects.

Put an X in the box which shows about how many days in the school year the item is used, in working with all or part of your class.

Many items may not be used at your grade level or in your school. For those not used, just leave the spaces blank.

Check approximate frequency if used:

	All or most days in the year	2-3 times a week	Once a week	Several times a year	Once or twice a year
A. READING MATERIALS					
1. Basic readers from one or more graded series.....					
2. Supplementary readers from one or more reading series.....					
3. Children's story books, (not part of a reading series).....					
4. Special books for slower readers.....					
5. Children's magazines and newspapers like My Weekly Reader...					
6. Experience charts based on the children's activities or interests.....					
7. Library books from school or public library.....					
8. Special books for advanced readers.....					
9. Children participate in Book Club? Yes___No___.....					

	ALL OR MOST DAYS IN THE YEAR	2-3 TIMES A WEEK	ONCE A WEEK	SEVERAL TIMES A YEAR	ONCE OR TWICE A YEAR
10. Content books (science, social science, health).....					
11. Other: (describe) _____ _____ _____					
B. WORKBOOKS AND EXERCISES					
1. Reading readiness workbooks and exercises for children not yet reading.....					
2. Graded workbooks which accompany basic readers.....					
3. Special phonics workbooks.....					
4. Workbooks or exercises prepared by the teacher.....					
5. Dittoed Workbooks or exercises..					
6. "Reading laboratory" kits.....					
7. Other: (describe) _____ _____ _____					

C. AUDIO-VISUAL ACTIVITIES	ALL OR MOST DAYS IN THE YEAR	2-3 TIMES A WEEK	ONCE A WEEK	SEVERAL TIMES A YEAR	ONCE OR TWICE A YEAR
1. Reading machines for improving speed or perception.....					
2. Films or filmstrips specifically for reading or readiness instruction.....					
3. Films or filmstrips for other subjects or general enrichment.....					
4. School television programs related to reading.....					
5. School television programs for other subjects.....					
6. Field trips to broaden experience of the children.....					
7. Flannel-boards.....					
8. Pictures (story-telling).....					
9. Puppets.....					
10. Reading poetry to children (by teacher).....					
11. Reading stories to children (by teacher).....					
12. Listening to records (auditory training).....					
13. Listening to records (story material).....					
14. Using tape recorder.....					
15. Overhead projector.....					
16. Tachistoscope or Tach-X.....					
17. Other: (describe) _____					
_____					
_____					

D. TRAINING FOR WORD RECOGNITION	ALL OR MOST DAYS IN THE YEAR	2-3 TIMES A WEEK	ONCE A WEEK	SEVERAL TIMES A YEAR	ONCE OR TWICE A YEAR
1. Learning new words as wholes from flashcards, blackborad, or readers.....					
2. Learning to sound out words from letters and letter-combinations..					
3. Learning to use context or picture clues to recognize new words.....					
4. Noticing similar sounds in words and relating them to the letters.....					
5. Using the outline shape of the word as a means of recognition...					
6. Noticing special features like tall letters or double letters as means of word recognition.....					
7. Systematic learning of rules for sounding letters and letter-combinations.....					
8. Finding smaller words in longer ones.....					
9. Learning to divide words into syllables.....					
10. Learning capitalized and lower case forms of same word.....					
11. Plurals and endings.....					
Recognizing and reading:					
12. Contractions.....					
13. Possessives.....					
14. Abbreviations.....					
15. Word recognition games.....					
16. Compound words.....					
17. Other: _____ _____ _____					

	ALL OR MOST DAYS IN THE YEAR	2-3 TIMES A WEEK	ONCE A WEEK	SEVERAL TIMES A YEAR	ONCE OR TWICE A YEAR
E. WORD MEANING AND COMPREHENSION					
1. Relating words to pictures or to objects.....					
2. Dramatizing word meanings.....					
3. Children use dictionaries to find word meanings.....					
4. Reading silently and retelling in their own words what they read.....					
5. Children write about own experiences or original stories.....					
6. Learning about words with similar or opposite meanings..					
7. Learning meanings of suffixes as clues to word meaning (ing, ed, ly).....					
8. Learning to read in phrases or thought units to help get meaning (in oral reading).....					
9. Children arrange picture sequence and tell story.....					
10. Other: _____ _____ _____					

	ALL OR MOST DAYS IN THE YEAR	2-3 TIMES A WEEK	ONCE A WEEK	SEVERAL TIMES A YEAR	ONCE OR TWICE A YEAR
F. STUDY AND CRITICAL SKILLS					
1. Using reference books to locate information.....					
2. Children criticize stories or articles, examine motives, facts or conclusions.....					
3. Learning to recognize author's purpose and point of view.....					
4. Children report on books they read.....					
5. Learning the alphabet as aid to reading.....					
6. Learning alphabet as aid to writing.....					
7. Children help make and read charts.....					
8. Children make scrapbooks.....					
9. Anticipating outcomes of stories.....					
10. Recounting sequence of events after reading.....					
11. Reading Children's own stories..					
12. Teacher writes story as child dictates.....					
13. Other _____					
_____					
_____					

	ALL OR MOST DAYS IN THE YEAR	2-3 TIMES A WEEK	ONCE A WEEK	SEVERAL TIMES A YEAR	ONCE OR TWICE A YEAR
G. ORAL READING ACTIVITIES					
1. Oral reading from basic readers.....					
2. Oral reading by children from books of their own choice.....					
3. Learning and reciting poetry.....					
4. Choral reading.....					
5. Oral reading in a dramatization.....					
6. Other: _____					
_____					
_____					

H. CLASSROOM ORGANIZATION

1. What type of classroom organization do you use most frequently? Double XX your most frequent practice; single X other arrangements used sometimes.

    1. Mainly individual instruction _____
    2. Mainly instruction in groups based on reading ability _____
    3. Mainly instruction in groups based on social factors, interests, or other factors not involving reading ability. _____
    4. Mainly by instructing the whole class _____

2. How many reading groups do you commonly have in your class? _____

3. About how many reading groups do you personally work with each day? _____

4. How many days per week do you usually give reading lessons to your class? _____

5. Approximately how many minutes per day are given to the teaching of reading or readiness training? (Not counting the time in teaching reading in other subjects) _____

6. Do you teach reading skills in connection with other subjects, as science, social studies? If yes, in what subjects _____

_____

7. About how many minutes per day are spent in teaching reading skills in these content subjects? _____